

**IN THE CLAIMS**

Please amend the claims as follows:

17. (Currently Amended) A synchronization pulse detector, comprising:

a shape detector for processing samples of an input signal having a synchronization pulse and a plurality of non-synchronization pulses to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, non-time varying portion, followed by a first, time-varying portion, followed by a second, non-time varying portion, followed by a second, time-varying portion, followed by a third, non-time varying portion, one of the first and second, time-varying portions having a positive slope and the other one of the first and second, time-varying portions having a negative slope;

wherein the slope of the time varying portions are determined by comparing said input signal to a specified criterion based in part of the various slope requirements for the time varying portions.

18. (Previously Amended) The detector as claimed in claim 17, wherein said shape detector produces a pulse when said predetermined sequence is detected.

19. (Currently Amended) A synchronization pulse detector, comprising:

a shape detector for processing samples of an input signal having a series of synchronization pulses and a plurality of non-synchronization pulses to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, non-time varying portion, followed by a first, time-varying portion, followed by a second, non-time varying portion, followed by a second, time-varying portion, followed by a third, non-time varying portion, one of the first and second, time-varying portions having a positive slope and the other one of the first and second, time-varying portions having a negative slope, wherein the slope of the time varying portions are determined by comparing said input signal to a specified criterion based in part of the various slope requirements for the time varying portions;

said shape detector producing a shape detection pulse each time said predetermined sequence is detected; and

an evaluator responsive to the produced shape pulse detection pulses for determining whether such shape detection pulses are produced at a predetermined rate expected for the series of synchronization pulses.

20. (Currently Amended) A synchronization pulse detector, comprising:

a shape detector for processing samples of an input signal having a series of synchronization pulses and a plurality of non-synchronization pulses, each one of said synchronization pulses preceding a segment of the input signal having non-synchronization pulses, to determine whether such samples have a predetermined sequence;

said predetermined sequence being a first, non-time varying portion, followed by a first, time-varying portion, followed by a second, non-time varying portion, followed by a second, time-varying portion, followed by a third, non-time varying portion, one of the first and second, time-varying portions having a positive slope and the other one of the first and second, time-varying portions having a negative slope, wherein the slope of the time varying portions are determined by comparing said input signal to a specified criterion based in part of the various slope requirements for the time varying portions;

said shape detector producing a shape detection pulse and an associated value for the second, non-time varying portion each time said predetermined sequence is detected; and  
an evaluator responsive to the produced shape detection pulses and said associated values of said second, non-time varying portions for determining whether one of said associated values of said produced second, non-time varying portions is substantially higher, lower, or the same as a reference value derived from a previous segment of the input signal.

21. (Original) The detector as claimed in claim 20, wherein said evaluator includes a time window responsive to the produced shape detection pulses for determining whether said shape detection pulses are produced at a predetermined rate expected for the series of synchronization pulses.

22. (Previously Amended) A method for detection of a synchronization pulse from an input signal having a plurality of non-synchronization pulses, comprising: